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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,487	09/24/2001	Hiroyuki Shimizu	214056US0 CONT	6804

22850 7590 05/21/2003

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EXAMINER	
JACKSON, MONIQUE R	

ART UNIT	PAPER NUMBER
1773	

DATE MAILED: 05/21/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/960,487	SHIMIZU ET AL.	
	Examiner	Art Unit	
	Monique R Jackson	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 March 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4,9,10 and 12-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,9,10,12,13 and 15-20* is/are rejected.

7)☒ Claim(s) *3,14, and 21-23* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. *09/190,264* .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/22/03 has been entered.

2. The amendment filed 1/22/03 has been entered. New claims 14-23 have been added. Claims 1, 3-4, 9-10, and 12-23 are pending in the application.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

4. Claims 1, 4, 9, 10, and 12-13, and new claims 15-18, which are combinations of the former, are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 09-122974A (JP'974) in view of Katono et al for the reasons recited previously and restated below.

JP'974 teaches a welding wire coated on the surface with 0.01-0.6g MoS_2 and/or WS_2, 0.01-0.15g of one or more metal soaps, and 0.01-0.15 g lanolin oil, per 10kg of wire but do not specifically teach that the metal soap is a metal soap of an acid as instantly claimed (Abstract). However, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any known species of metal soap commonly utilized in the art, wherein Katono et al specifically teach the use of sodium or potassium metal soaps of carboxylic acids comprising 8 to 22 carbon atoms. Therefore, it would have been obvious to one having ordinary

skill in the art to utilize a sodium or potassium metal salt of carboxylic acids of 8 to 22 carbon atoms as taught by Katono et al for the invention taught by JP'974. Further, it would have been obvious to one having ordinary skill in the art to determine the optimum amount of lubricating composition to provide per 10kg of wire given that the amount of lubricating composition is a result-effective variable affecting the lubricity of the metal wire.

5. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'974 in view of Katono and in further view of McCune (USPN 5,976,704.) The teachings of JP'974 in view of Katono are discussed above. JP'974 teaches a weldable wire coating wherein the coating includes MoS_2 and/or WS_2 as lubricants but does not teach the use of carbon graphite or polytetrafluoroethylene as lubricants in the coating. However, McCune teaches that graphite and polytetrafluoroethylene are functional equivalents to MoS_2 in terms of solid lubricants in wire coatings (Col. 2, lines 8-15) and hence it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize graphite or polytetrafluoroethylene, which are known functionally equivalent lubricating materials to MoS_2, in the invention taught by JP'974 in view of Katono.

Allowable Subject Matter

6. Claims 3, 14, 21, 22 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: the closest prior art JP'974 does not teach or fairly suggest a welding wire comprising a deposit on

the surface of the wire wherein the deposit comprises a saturated or unsaturated, linear or branched, carboxylic acid having from 5 to 12 carbon atoms as instantly claimed.

Response to Arguments

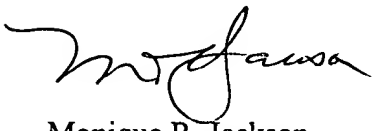
8. Applicant's arguments filed 1/22/03 have been fully considered but they are not persuasive. Applicants respectfully traversed the obviousness rejection over JP'974 in view of Katono by alleging unexpected results with regards to significant improvements in welding wire feedability achieved according to the instantly claimed invention. The Applicants refer to Tables 9-1 to 9-6 in the specification that compare inventive examples with 5 to 12 carbon atoms and comparative examples with stearic acid (18 carbon atoms) or with acetic acid (2 carbon atoms). However, as previously noted, upon review of Tables 9-1 to 9-6 in view of Tables 8-1 to 8-7, which provide the specifics for each example presented in Tables 9-1 to 9-6, it is noted that there are several parameters that change between the examples, including wire/flux rate, fatty acid or salt thereof, feed oil, lubricating particles, amount of deposited fatty acid or salt thereof, and total of deposits. The Applicants specifically compare Inventive Example 6 to Comparative Example 53, and Inventive Example 7 to Comparative Examples 53, 62 and 63, however it is noted that features other than the type of fatty acid or salt thereof are also changed between the examples. In terms of the comparison between Ex. 6 and Ex. 53, the feed oil is different, the lubricating particles are different, the amount of deposited fatty acid or salt thereof is different, and the amount of total deposit is different. These same features, with the exception of lubricating particle type, are all different when comparing Ex. 7 to Ex. 53, Ex. 62 or Ex. 63. Hence, the Examiner takes the position that the data is inconclusive because it does not provide a clear comparison between inventive examples as instantly claimed with 5 to 12 carbon atoms to

examples outside this range wherein the other parameters remain constant, particularly given that the data in Tables 9-1 to 9-3 appears to suggest that a change in one of the other parameters affects the feedability and clogging of the resulting welding wire. In fact, there appears to be no two examples wherein the only change is the type of fatty acid or salt thereof. Further, the data presented does not appear to provide any showing of unexpected results with regards to the claimed invention wherein the compound has a saturated or unsaturated, linear or branched, structure from 5 to 12 carbon atoms, particularly given that inventive examples 31-51 include compounds outside the claimed invention, namely cyclic structures. Additionally, the comparative examples only utilize potassium acetate (2 carbon atoms) or potassium, sodium or calcium stearate (18 carbon atoms), and therefore, it is unclear to the Examiner how these very limited examples at 2 carbon atoms and 18 carbon atoms provide a showing of unexpected results for a compound selected from the group consisting of carboxylic acids and metal carboxylates; having a saturated or unsaturated, linear or branched structure with from 5 to 12 carbon atoms, as in instant claim 1. The data does not provide a showing that compounds with 3 or 4 or 13 or 14 or 15 carbon atoms would not produce similar results to those compounds instantly claimed, hence the Examiner questions whether the endpoints 5 and 12 are critical. Therefore, the Examiner maintains her position with regards to the obviousness rejection over JP'974 in view of Katono, but would reconsider her position upon a clear and conclusive showing of unexpected results with regards to the instantly claimed compounds.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 703-308-0428. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on 703-308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Monique R. Jackson
Patent Examiner
Technology Center 1700
May 18, 2003